

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000886**Date Inspected:** 20-Nov-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2330**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** Lay Tou & Li Xiu Yang  
**Inspected CWI report:** Yes No N/A  
**Electrode to specification:** Yes No N/A  
**Qualified Welders:** Yes No N/A  
**Approved Drawings:** Yes No N/A

**CWI Present:** Yes No  
**Rod Oven in Use:** Yes No N/A  
**Weld Procedures Followed:** Yes No N/A  
**Verified Joint Fit-up:** Yes No N/A  
**Approved WPS:** Yes No N/A  
**Delayed / Cancelled:** Yes No N/A  
**Component:** 77 meter mock up

**Bridge No:** 34-0006**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) inspector, Scott Croff, was present at Zhenhua Port Machinery Company, Ltd (ZPMC) to observe the scheduled mock up construction and production construction of the SAS Superstructure.

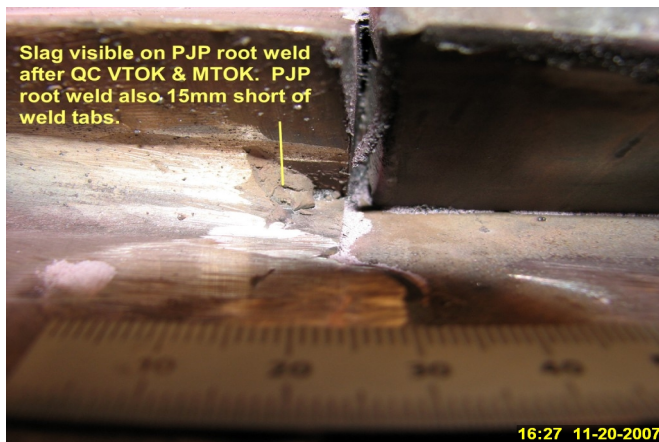
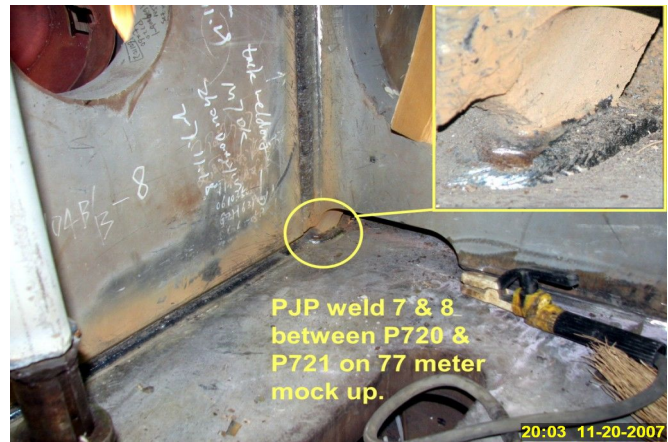
Bay 2: The QA inspector observed the ZPMC technician Zhou Dong Yun conducting magnetic particle testing (MT) on partial joint penetration (PJP) root welds. Upon completion of the MT, the Quality Control Liaison (QCL) Li Xiu Yang (Tom) relayed information to the QA inspector that all root welds were acceptable. The QA inspector also noted that "MTOK" markings have been made, indicating that welds were visually acceptable and no relevant MT indications were observed by the ZPMC technician. The QA inspector made random observations of the PJP root welds. The QA inspector noted that weld tabs are not placed at all of the weld terminations at this time. The QA inspector observed that several of the PJP root welds appear to have insufficient length and do not extend onto the abutting weld tabs (welds #2, 7, 8 & 18). The QA inspector examined one of these welds and observed slag at the end of the root, for approximately 15mm short of the plate edge. The QA inspector asked the QCL "Tom" why the root welds did not extend the full length of the prepared groove and how visual and MT inspection could be acceptable if slag was covering up a portion of the weld. The QCL then spoke with ZPMC worker Zhang Lei and the ZPMC technician Zhou Dong Yun. The QA inspector was informed that the slag would be removed and that portion of the PJP root weld will be re-inspected. The QA inspector was also informed that Zhang Lei stated that the plates would be trimmed later and the PJP root weld did not need to extend onto the weld tabs. The QA inspector asked the QCL "Tom" if there were any approved documents relating to the trimming of the plates and PJP welds. The QCL "Tom" spoke with Zhang Lei to inquire about the documentation. The QCL "Tom" then informed the QA inspector that no documents were available at this time. The QA inspector noted

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that PJP welds 7 & 8 between P720 & P721 are not welded. The QA inspector was informed that those root welds will be welded and inspected later. The QA inspector also noted that all observed PJP root weld inspections were conducted with the base metals at ambient temperatures.

The QA inspector later observed welding in progress on the above mentioned PJP welds (#7 & #8) that, to the QA inspector's knowledge had no visual inspection or MT on the PJP root weld. The QA inspector asked the QCL Lay Tou if there has been any additional inspection of the PJP root welds. The QCL replied that the welds were all inspected earlier, when the QA inspector was present. The QA inspector asked the QCL to further inquire on the root welds and the QCL was shown the welds that the QA inspector observed and noted were not completed. The QCL spoke with several ZPMC personnel near the work and could not provide any further information regarding additional inspection of the previously unwelded/un-inspected PJP root welds. The QA inspector attempted to make further observations of the parts, however heating pads were put in place by ZPMC workers and no observations could be conducted.



## Summary of Conversations:

The QA inspector Scott Croff had conversations with the ZPMC QC Liasons (QCL) Li Xiu Yang "Tom" and Lay Tou regarding the work in progress and the observed inspections, as described above. The QA inspector was notified of the completion status as the ZPMC technician and other workers are informing the ZPMC QCL directly. The notable conversations are described above.

The QA inspector Scott Croff had general conversations with the QA inspectors Bruce Berger and Roscoe Dixon.

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The QA inspectors discussed the above mentioned observations and what is being fabricated at other locations. There were no other notable conversations during this shift.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Croff, Scott	Quality Assurance Inspector
<b>Reviewed By:</b>	Cuellar, Robert	QA Reviewer

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